



TECHNICAL DATA SHEET

SANTOLUBE® OS-138

High-temperature Radiation-resistant Base Fluid

SANTOLUBE® OS-138 is a polyphenyl ether with exceptionally low volatility and resistance to degradation from heat, oxygen, radiation, and chemical attack. It is therefore well-suited for designing lubricants for applications that experience extreme temperatures and other adverse environments. In addition, SANTOLUBE® OS-138 is compatible with most metals, plastics, and elastomers and is essentially nontoxic, especially when proper hygienic practices are employed.

ATTRIBUTES

- ◆ Exceptionally Low Volatility
- ◆ Resists Chemical Attack
- ◆ Resists Oxidation and Radiation Degradation
- ◆ Prevents Noise and Fretting Wear
- ◆ High Thermal Stability
- ◆ High Surface Tension
- ◆ Excellent Resistance to Rust and Corrosion
- ◆ Protects Precious Metals

TYPICAL PHYSICAL AND PERFORMANCE PROPERTIES¹

Appearance	Clear, Colorless Fluid	Corrosion and Oxidation Test - ASTM D 4636 (FTM 791-5307/5308) [600°F, 48h]	
Viscosity at 40°C – ASTM D 445, cSt	1654	TAN Change	0
Viscosity at 100°C –ASTM D 445, cSt	23	Viscosity Change at 40°C	None
Pour Point – ASTM D 97, °C	13	Metal Weight Change, mg	
Flash point – ASTM D 92, °C	327	Steel	0.02
Refractive Index at 25°C	1.634	Silver	0.03
Thermal Stability up to °C	447	Copper	0.14
Surface Tension at 100°F, Dyne/cm	54.2	Aluminum	0.04
Precious Metals Compatibility	Pass	Titanium	0.02
Elastomer Compatibility – ASTM D 471 [Viton, Silicone, Teflon, Buna N]	Pass	Metals (Steel/Copper) Compatibility	Pass

¹ Please note that these data are typical of samples tested in the laboratory and are not to be considered as sales specifications.